AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A zoom lens comprising, in order from an object side to an image side:

a first lens unit of a negative optical power, said first lens unit being a lens unit disposed at a position closest to the object side in the zoom lens;

a second lens unit of a positive optical power, said second lens unit being a lens unit disposed at a position following the first lens unit in order from the object side, said second lens unit having an aspherical lens element; and

a third lens unit of a positive optical power, said third lens unit being a lens unit disposed at a position following the second lens unit in order from the object side, said third lens unit having a cemented lens formed by cementing a positive lens element to a negative lens element and moving along an optical axis for zooming,

wherein a space between said first and second lens units decreases, and a space between said second lens unit and said third lens unit increases in zooming from a wide angle end to a telephoto end, and

letting NLi be the number of lens elements constituting an ith lens unit, a condition defined by

$$NL3 < NL2 \leq NL1$$

is satisfied.

Claim 2 (Original): A zoom lens according to claim 1, wherein

said first lens unit has, in order from the object side to the image side, a negative lens element in a meniscus shape with a concave surface facing the image side and a positive lens element in a meniscus shape with a convex surface facing the object side, and has not less than three lens elements, and

said second lens unit consists of, in order from the object side to the image side, a cemented lens formed by cementing a positive lens element to a negative lens element and a positive lens element in a biconvex shape.

Claim 3 (Original): A zoom lens according to claim 2, wherein letting d be a thickness of the cemented lens of said second lens unit on the optical axis, and fw be a focal length of an overall system at a wide angle end, a conditional expression,

$$0.3 < d/fw < 0.5$$

is satisfied.

Claim 4 (Original): A zoom lens according to claim 1, wherein

said first lens unit has, in order from the object side to the image side, a negative lens element in a meniscus shape with a concave surface facing the image side and a positive lens element in a meniscus shape with a convex surface facing the object side, and

said second lens unit consists of, in order from the object side to the image side, a cemented lens formed by cementing a positive lens element to a negative lens element and a positive lens element in a biconvex shape.

Claim 5 (Original): A zoom lens according to claim 4, wherein letting d be a thickness of the cemented lens of said second lens unit on the optical axis, and fw be a focal length of an overall system at a wide angle end, a conditional expression,

$$0.3 < d/fw < 0.5$$

is satisfied.

Claim 6 (Original): A zoom lens according to claim 1, wherein

said second lens unit has, in order from the object side to the image side, a cemented lens formed by cementing a positive lens element to a negative lens element and a positive lens element with biconvex surfaces, and

letting Ra be a radius of curvature of a lens surface of the cemented lens of said second lens unit which is located nearest to the object side, Rb be a radius of curvature of a lens surface of the cemented lens of said second lens unit which is nearest to an image side, Rc be a radius of curvature of a lens surface of said biconvex positive lens element which is located on the object side, and Rd be a radius of curvature of a lens surface of said biconvex positive lens element which is located on the image side, conditional expressions,

$$0.7 < Rb/Ra < 1.2$$

$$-0.6 < (Rd + Rc)/(Rd - Rc) < 0.6$$

are satisfied.

Claim 7 (Original): A zoom lens according to claim 6, wherein

letting d be a thickness of the cemented lens of said second lens unit on the optical axis, and fw be a focal length of an overall system at a wide angle end, a conditional expression,

$$0.3 < d/fw < 0.5$$

is satisfied.

Claim 8 (Original): A zoom lens according to claim 1, wherein a lens surface of said second lens unit which is located nearest to the object side has a convex shape on the object side and has aspherical shape which is designed to weaken a converging effect from the optical axis to a periphery.

Claim 9 (Previously Presented): A zoom lens comprising, in order from an object side to an image side:

a first lens unit of a negative optical power;

a second lens unit of a positive optical power; and

a third lens unit of a positive optical power, said third lens unit having a cemented lens formed by cementing a positive lens element to a negative lens element and moving along an optical axis for zooming,

wherein a space between said first and second lens units decreases, and a space between said second lens unit and said third lens unit increases in zooming from a wide angle end to a telephoto end, and

letting NLi be the number of lens elements constituting an ith lens unit, a condition defined by

$$NL3 < NL2 \leq NL1$$

is satisfied; and

wherein said third lens unit moves along a convex locus to the image side in zooming from the wide angle end to the telephoto end.

Claim 10 (Original): A zoom lens according to claim 1, wherein

said second and third lens units move along the optical axis for zooming, and

said second lens unit has a cemented lens formed by cementing a positive lens element to a negative lens element.

Claim 11 (Previously Presented): A zoom lens according to claim 1, wherein letting f3n be a focal length of the negative lens element of the cemented lens of said third lens unit, f3 be a focal length of said third lens unit, v3n be an Abbe number of the negative lens element of the cemented lens of said third lens unit, and N3n be a refractive index of the negative lens element of the cemented lens of said third lens unit, conditional expressions,

$$0.8 < |f3n/f3| < 1.7$$

$$v3n < 40$$

$$1.7 < N3n$$

are satisfied.

Claim 12 (Original): A zoom lens according to claim 1, wherein said first lens unit has, in order from the object side to the image side, a positive lens element with a convex

surface facing the object side, a negative lens element in a meniscus shape with a concave surface facing an image side, a negative lens element, and a positive lens element in a meniscus shape with a convex surface facing the object side.

Claim 13 (Original): A zoom lens according to claim 1, wherein letting Ml be a zoom position where said third lens unit is located nearest to the image side in an entire zooming range, x3w be a moving distance of said third lens unit in zooming from the wide angle end to the zoom position Ml, and x3t be a moving distance of said third lens unit in zooming from the zoom position Ml to the telephoto end, a conditional expression,

$$0.2 < x3w/x3t < 3.0$$

is satisfied.

Claim 14 (Original): A zoom lens according to claim 1, wherein letting $\beta 3t$ be a lateral magnification of said third lens unit at the telephoto end, a conditional expression,

$$0.6 < \beta 3t < 0.8$$

is satisfied.

Claim 15 (Original): A zoom lens according to claim 1, wherein said third lens unit moves along the optical axis for focusing.

Claim 16 (Previously Presented): A zoom according to claim 1, wherein

said second lens unit has, in order from the object side to the image side a cemented lens formed by cementing a positive lens element to a negative lens element and a positive lens element in a biconvex shape surfaces, and

letting Ra be a radius of curvature of a lens surface of the cemented lens of said second lens unit which is located nearest to the object side, Rb be a radius of curvature of a lens surface of the cemented lens of said second lens unit which is located nearest to an image side, Rc be a radius of curvature of a lens surface of said positive lens element in a biconvex shape which is located on the object side, Rd be a radius of curvature of a lens surface of said positive lens element in the biconvex shape which is located on the image side, d be a thickness of the cemented lens of said second lens unit on the optical axis, fw be a focal length of an overall system at a wide angel end, f3n be a focal length of the negative lens element of the cemented lens of said third lens unit, f3 be a focal length of said third lens unit, v3n be an Abbe number of the negative lens element of the cemented lens of said third lens unit, and N3n be a refractive index, conditional expressions,

$0.7 < Rb/Ra < 1.2$

$-0.6 < (Rd + Rc)/(Rd - Rc) < 0.6$

$0.3 < d/fw < 0.5$

$0.8 < |f3n/f3| < 1.7$

$v3n < 40$

$1.7 < N3n$

are satisfied.

Claim 17 (Original): A zoom lens according to claim 16, wherein letting Ml be a zoom position where said third lens unit is located nearest to the image side in an entire zooming range, x3w be a moving distance of said third lens unit in zooming from the wide angle end to the zoom position Ml, x3t be a moving distance of said third lens unit in zooming from the zoom position Ml to the telephoto end, and P3t be a lateral magnification of said third lens unit at the telephoto end, conditional expressions,

$0.2 < x3w/x3t < 3.0$

$0.6 < \beta 3t < 0.8$

are satisfied.

Claim 18 (Original): A zoom lens according to claim 1, wherein said zoom lens forms an image on a photoelectric conversion element.

Claim 19 (Original): An image taking apparatus comprising an image taking lens for forming an image of an object on a photosensitive surface, said image taking lens comprising said zoom lens defined in claim 1.

Claim 20 (Original): An image taking apparatus comprising:

a photoelectric conversion element; and

an image taking lens for forming an image of an object on a photosensitive surface, said image taking lens comprising said zoom lens defined in claim 1.

Claim 21 (Previously Presented): A zoom lens comprising, in order from an object side to an image side:

a first lens unit of a negative optical power, said first lens unit being a lens unit disposed at a position closest to the object side in the zoom lens;

a second lens unit of a positive optical power, said second lens unit being a lens unit disposed at a position following the first lens unit in order from the object side, said second lens unit having a cemented lens; and

a third lens unit of a positive optical power, said third lens unit being a lens unit in order from the object side, said third lens unit moving along an optical axis for zooming,

wherein a space between said first and second lens unit decreases, and a space between said second lens unit and said third lens unit increases in zooming from a wide angle end to a telephoto end, and

letting NLi be the number of lens elements constituting an ith lens unit, a conditional expressions,

$$NL3 < NL2 \leq NL1$$

$$NL2 = 3$$

are satisfied.

Claim 22 (Previously Presented): A zoom lens comprising, in order from an object side to an image side:

a first lens unit of a negative optical power, said first lens unit being a lens unit disposed at a position closest to the object side in the zoom lens;

a second lens unit of a positive optical power; said second lens unit being a lens unit disposed at a position following the first lens unit in order from the object side, said second lens unit having a cemented lens formed by cementing a positive lens element to a negative lens element, a thickness of the positive lens element constituting the cemented lens being greater than a thickness of the negative lens element; and

a third lens unit of a positive optical power, said third lens unit being a lens unit disposed at a position following the second lens unit in order from the object side, said third lens unit moving along an optical axis for zooming and focusing,

wherein a space between said first and second lens unit decreases, and a space between said second lens unit and said third lens unit increases in zooming from a wide angle end to a telephoto end, and

letting NLi be the number of lens elements constituting an ith lens unit, a condition defined by

$$NL3 < NL2 \leq NL1$$

is satisfied.

Claim 23 (Previously Presented): An image taking apparatus comprising:

a photoelectric conversion element; and

an image taking lens for forming an image of an object on a photosensitive surface of the photoelectric conversion element, said image taking lens comprising said zoom lens defined in claim 21.

Claim 24 (Previously Presented): An image taking apparatus comprising:

a photoelectric conversion element; and

an image taking lens for forming an image of an object on a photosensitive surface of the photoelectric conversion element, said image taking lens comprising said zoom lens defined in claim 22.

Claim 25 (Previously Presented): An image taking apparatus comprising:

a photoelectric conversion element; and

an image taking lens for forming an image of an object on a photosensitive surface of the photoelectric conversion element, said image taking lens comprising said zoom lens defined in claim 9.

Claim 26 (Previously Presented): A zoom lens comprising, in order from an object side to an image side:

a first lens unit of a negative optical power, said first lens unit being a lens unit disposed at a position closest to the object side in the zoom lens, said first lens unit moving along an optical axis for zooming;

a second lens unit of a positive optical power; said second lens unit being a lens unit disposed at a position following the first lens unit in order from the object side, said second lens unit having a cemented lens formed by cementing a positive lens element to a negative lens element, a thickness of the positive lens element constituting the cemented lens being greater than a thickness of the negative lens element; and

a third lens unit of a positive optical power, said third lens unit being a lens unit disposed at a position following the second lens unit in order from the object side, said third lens unit moving along the optical axis for zooming,

wherein a space between said first and second lens unit decreases, and a space between said second lens unit and said third lens unit increases in zooming from a wide angle end to a telephoto end, and

letting NLi be the number of lens elements constituting an ith lens unit, a condition defined by

$$NL3 < NL2 \leq NL1$$

is satisfied.

Claim 27 (Previously Presented): A zoom lens comprising, in order from an object side to an image side:

a first lens unit of a negative optical power, said first lens unit being a lens unit disposed at a position closest to the object side in the zoom lens;

a second lens unit of a positive optical power; said second lens unit being a lens unit disposed at a position following the first lens unit in order from the object side, said second lens unit having a cemented lens formed by cementing a positive lens element to a negative lens element, a thickness of the positive lens element constituting the cemented lens being greater than a thickness of the negative lens element; and

a third lens unit of a positive optical power, said third lens unit being a lens unit disposed at a position following the second lens unit in order from the object side, said third lens unit moving along an optical axis for zooming,

wherein lens units included by said zoom lens are only said first, second and third lens unit,

wherein a space between said first and second lens unit decreases, and a space between said second lens unit and said third lens unit increases in zooming from a wide angle end to a telephoto end, and

letting NLi be the number of lens elements constituting an ith lens unit, a condition defined by

$$NL3 < NL2 \leq NL1$$

is satisfied.

Claim 28 (Previously Presented): An image taking apparatus comprising:

a photoelectric conversion element; and

an image taking lens for forming an image of an object on a photosensitive surface of the photoelectric conversion element, said image taking lens comprising said zoom lens defined in claim 26.

Claim 29 (Previously Presented): An image taking apparatus comprising:

a photoelectric conversion element; and

an image taking lens for forming an image of an object on a photosensitive surface of the photoelectric conversion element, said image taking lens comprising said zoom lens defined in claim 27.